

Technical Report 69-5

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Relationship Between Army Recruit Characteristics and First Tour Performance

by

John S. Caylor

HumRRO Division No. 3 (Recruit Training)

April 1969

Prepared for:

Office, Chief of
Research and Development
Department of the Army

Contract DAHC 19-69-C-0018

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HumRRO Division No. 3 (Recruit Training)
Presidio of Monterey, California
The George Washington University
HUMAN RESOURCES RESEARCH OFFICE

Technical Report 69-5
Work Unit TRANSITION
Sub-Unit II

The Human Resources Research Office is a nongovernmental agency of The George Washington University. HumRRO research for the Department of the Army is conducted under Contract DAHC 19-69-C-0018. HumRRO's mission for the Department of the Army is to conduct research in the fields of training, motivation, and leadership.

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

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FOREWORD

The objective of Work Unit TRANSITION, performed by the Human Resources Research Office, was to conduct research into the development of the recruit's motivation for service and attitudes toward the Army through the period of Basic Combat Training (BCT). In the research reported here, factors that affected early attitude development were selected and their relationship to the quality of the recruit's service throughout his entire first tour of active duty was studied. The research involved a follow-up study during 1963-64 on first-tour records of soldiers who had initially been studied during their BCT in 1961.

The study was conducted by HumRRO Division No. 3 (Recruit Training), Presidio of Monterey, California. Director of Research of the Division at the initiation and completion of this study was Dr. Howard H. McFann. Dr. John E. Taylor was Director of Research during the intermediate phase of research.

Military support for the study was provided by the U.S. Army Training Center Human Research Unit. The study was initiated while MAJ Betty K. Kunert was Acting Chief and completed under LTC David S. Marshall as Chief.

Work Unit leader at the initiation of the study was Dr. Richard Snyder. Dr. Harry A. Burdick, SP 4 Richard Nutter, and Mr. William H. Burckhardt participated in data collection and analysis.

HumRRO research for the Department of the Army is conducted under Contract DAHC 19-69-C-0018. Work Unit TRANSITION was conducted as part of Army Training, Motivation, and Leadership Research Project 2J062107A712.

Meredith P. Crawford
Director
Human Resources Research Office

SUMMARY AND CONCLUSIONS

Military Problem

Knowledge of the relationship between characteristics of recruits and their performance both in training and in their unit assignment is an important consideration in policy decisions regarding selection, training, classification, assignment, and retention. Recruit input is highly variable on many factors commonly related to training accomplishment and to subsequent success during the recruit's initial (and, typically, only) tour of duty in the Army. Specific information on the relationship between performance differences, degree of success in the Army, and differences in trainee attributes is needed in order to understand the consequences of input factors.

Research Problem

In earlier research under HumRRO Work Unit TRANSITION in 1961, the effects of the Reception Station and basic training experience on the attitudes of recruits toward Army service were examined. In the process a variety of factors affecting the recruit's adaptation to Army life were considered. These variables, singly and in combination, were related to the development of recruit attitudes toward the Army at the end of Basic Combat Training (BCT).

In the interest of determining the relationship between the variables available at the end of BCT and subsequent performance, a follow-up study was conducted during 1963 and 1964 of soldiers who had been initially studied in BCT in 1961, obtaining information on their records throughout the remainder of their first tour of active duty.

Method

Data collection was entirely administrative in nature—trainees were not involved with the completion or return of data forms. Data were collected on 1,782 volunteers and 2,620 draftees in 30 BCT companies by means of questionnaires inserted in the 201 files of the recruits with the request that they be returned to the researchers when the men involved were terminated in 1963 and 1964. The questionnaires were completed by the Personnel Officer at the trainee's out-processing station, and included information on: MOS, grade and time-in-grade, conduct and efficiency ratings, awards and commendations, courts-martial convictions, service schools attended, reason for termination of committed period of active duty (including reenlistment action), extensions of tour, and reenlistment eligibility.

Data were expressed by means of a single composite criterion score (CCS) a summary of the soldier's success in and contribution to the Army in his first tour. Analyses were conducted to determine the relationship of several recruit characteristic variables to the criterion. Recruit characteristic variables were: age, education, General Technical Aptitude Area (GT) score, BCT proficiency measures, sociometric peer ratings, attitude toward the Army, and career orientation.

Results

Data analyses were conducted separately for the volunteer and draftee subjects. Unless otherwise noted, the same pattern of results was found for both groups.

The GT level, educational level, and age of recruits were indicative of their success in the Army during their first tour of duty. The older recruit with more education and higher aptitude had a better record on the criterion measure of success and contribution to the Army.

Performance in BCT was also indicative of later contribution to the Army. The better a recruit performed in BCT, the better he did during the rest of his initial tour, as reflected by the scores of both draftees and volunteers on the BCT Graded Proficiency Test and by volunteers on weapons performance. BCT Physical Combat Proficiency Test scores did not give any indication of later Army performance.

Recruits who received the higher evaluations from their peers also performed better in subsequent Army service.

The attitudes of recruits toward a career in the Army related to their subsequent contribution to the Army during their first tour, but in a negative sense. Recruits with stronger career orientation got lower scores on the criterion measure of Army success. Volunteer recruits who demonstrated higher levels of general reactions to the Army and Army life (TRANSITION Attitude III) also got lower scores on the criterion measure.

A statistical (multiple correlation) comparison of the combined recruit characteristics (age, education, GT scores, BCT proficiency scores, peer ratings, attitude, and career orientation) with the criterion scores verified the findings of the comparisons made on individual variables. Only a slight increase in the relationship resulted from the joint comparison over the comparison obtained with the most effective single predictor characteristic.

Conclusions and Implications

The conclusions drawn from the results of the follow-up study apply to the personnel input of the Army as it was at the time of data collection, completed in 1964 with the termination of the draftees and volunteers studied:

- (1) Data on recruit characteristics, available prior to entry into service, were predictive of Army success over the first duty tour.

- (2) Recruits from the lower ranges of age, education, and GT were more likely than other recruits to encounter difficulty in adapting to the Army and to be promoted at a less than standard pace.

- (3) Early Army performance (BCT proficiency and evaluation by fellow trainees although not by commanders) was predictive of later Army success.

- (4) Early attitudes toward the Army and career orientation were negatively related to later Army performance.

- (5) There was consistency of recruit performance from the pre-service educational system through both the early Army experience of Basic Combat Training and the subsequent duty performance throughout the first tour. In general, it was the older recruit with higher aptitude, within both the volunteer and draftee components, who had continued his education further, fared better in BCT, was more highly evaluated by his trainee peers, and was accorded greater responsibility and reward by the Army.

The Composite Criterion Score developed in this study provides a prototype measure of the overall quality of performance of first-tour soldiers. Such a measure could be used routinely to monitor the effects of input standards and of general personnel policies in the areas of selection, training, and assignment. Component data for such a measure are standardly available in existing Army personnel records and require no added effort to generate data.

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Relationship Between
Army Recruit Characteristics
and First Tour Performance

BACKGROUND

In the Fall of 1961 HumRRO personnel of Work Unit TRANSITION undertook a two-stage study of recruit motivation and attitude toward Army service.

The initial study (Work Sub-Unit TRANSITION I) was designed to obtain information on factors affecting the development of recruit attitudes toward Army service as these attitudes existed at the end of Basic Combat Training (BCT)—after nine weeks of Army experience. Primary data were collected by means of an extensive questionnaire administered at the end of BCT to all recruits in 30 BCT companies at Fort Ord, California. The questionnaire covered family background, school and work history, attitudes toward military service, detailed responses to specific aspects of reception processing and BCT, sociometric choices, and some personality information. In addition, a substantial body of information was extracted from Army administrative records: aptitude scores, demographic data, and complete BCT proficiency measures.

Major findings of the first-stage study¹ were:

- (1) A general deterioration of recruit attitudes toward the Army over the period of early service (induction to completion of BCT).
- (2) Greatest attitude deterioration on the part of the older, more mature recruit who has a higher aptitude and is better educated.
- (3) Some indication that attitudes of individual platoon members were affected by the attitude of the majority of the platoon.
- (4) No relationship between attitudes and BCT performance.
- (5) Formation of friendship patterns within components, volunteers selecting volunteers as friends, and draftees choosing draftees.
- (6) Both volunteers and draftees according prestige and respect disproportionately heavily to draftees.

The first-stage study focused, necessarily, on recruit attitudes at the end of BCT as the criterion variable and on developing information on the several factors associated with the marked differences observed in these attitudes. Although information on BCT attitudes and their correlates is of inherent interest, its true importance is determined by the relationship between this early available information and the recruit's subsequent performance as an MOS-qualified soldier in his duty assignment.

To this end, the second stage of the study (Work Sub-Unit TRANSITION II) was designed to collect data on the recruit's service throughout the first tour of active duty. This report presents an analysis of the relationships between recruit characteristics studied at the end of BCT and the quality of the subsequent, first-tour performance of those recruits.

METHOD

The follow-up study reported here was undertaken for all volunteer and draftee recruits in the 30 experimental companies who had been studied

¹Snyder, Richard, and Caylor, John S. *Recruit Reactions to Early Army Experience*, HumRRO Professional Paper 7-69, March 1969.

intensively during BCT. Follow-up data were abstracted by clerical personnel from standard Army administrative records in the subject's Personnel (201) file at the termination of the first active duty tour. No data other than those routinely accruing in Army personnel files were sought.

SAMPLE

Follow-up questionnaires were inserted in the 201 files of all 3,803 volunteer (RA) and all 3,996 draftee (US) recruits in the 30 experimental companies completing BCT at Fort Ord between 6 October and 18 December 1961.¹ Instructions indicated that the questionnaire should be returned to HumRRO immediately upon the termination, for any cause, of the man's current tour of active duty (see Appendix A).

Completed questionnaires were received for 1,782 (47%) of the volunteers and for 2,620 (66%) of the draftees.

DATA COLLECTION INSTRUMENT

The follow-up, Summary of Service form (Appendix B) was inserted in the recruit's 201 file near the end of BCT and returned to the research office upon completion of that active duty tour. It was the sole source of follow-up data. The Summary of Service form was completed by the Personnel Officer at the soldier's out-processing station. Data to complete the form were extracted directly from the Enlisted Qualification Record (DA Form 20), Service Record, and other documents in the soldier's 201 file. Information was obtained on MOS, grade and time-in-grade, conduct and efficiency ratings, awards and commendations, courts-martial convictions, service schools attended, reason for termination of committed period of active duty (including reenlistment action), extensions of tour, and reenlistment eligibility.

DATA ANALYSIS

Because the criterion scores to measure the quality of a recruit's service could not be made comparable for volunteers and draftees, the data were analyzed separately, but in parallel, for the two components. The parallel analysis approach provided a double test of the effect of each recruit characteristic. Greater confidence as well as greater generalizability may thus be ascribed to relationships that were found in both groups than would be the case for results of a single group analysis.

In addition to the separate but parallel analysis for the two components, a dual approach was taken to relating recruit characteristics to the criterion. First, each recruit characteristic was related to criterion scores, using chi square comparisons for each component; this analysis provides a specific evaluation of each background characteristic but includes possible redundancy of comparisons because the items of background such as age, general technical aptitude,² and education are intercorrelated. Therefore, the second analysis—multiple correlation—was performed to provide a multivariate summary of the

¹No data were collected on the 787 RFA (REP) members of these companies since their six months of active duty was so brief and consisted of individual MOS-qualification training only.

²As measured by the Army Qualification Battery (AQB).

combined effects of background characteristics. This multivariate analysis adjusted results for the redundancy and was also performed in parallel for the volunteer and draftee groups.

CRITERION

The major interest of this study lay in the performance of the Army recruit over his standard first tour of duty following BCT. Unfortunately, none of the individual items of follow-up data, except for terminal pay grade, had enough variability to be used as a separate criterion measure. Accordingly, data from several items (Appendix C) were consolidated into a single composite criterion score (CCS) expressing the quality of the soldier's service in his initial tour.

This composite CCS was calculated only for subjects who served essentially a standard full-length initial tour of duty. Because of various early terminations for administrative reasons, leeway of 90 days was allowed in defining a full duty tour, which is typically two years for draftees and three years for volunteers.¹

Computation of CCS

Basically, the composite score was obtained by arbitrarily assigning 35 points to men terminating their first tour in Grades E-1 and E-2, and adding 20 points for each successive pay grade level. This basic score was then adjusted by assigning graduated penalty points for substandard conduct and efficiency ratings (maximum of -2), courts-martial convictions (maximum of -9)², termination of active duty for reasons of unsatisfactory service (maximum of -3), and ineligibility for reenlistment by reason of personnel actions against the trainee where he was found at fault (maximum of -7). Similarly, bonus points were awarded for accelerated promotions (maximum of +6) and for awards and commendations (maximum of +5).

The same basic procedure was used in computing the CCS for volunteers and for draftees. However, since the volunteers served three years as opposed to the draftees' two years, volunteers had a greater opportunity for promotion to higher levels and thus to earn higher criterion scores. Since terminal pay grade is the major contributor to the CCS, meaningful comparison cannot, regrettably, be made between draftees and volunteers, so analyses must be conducted within each component separately.

Composite scores were not spread evenly over the range of the criterion; rather, they tended to cluster heavily, the majority of men receiving a CCS determined by pay grade alone without any elaboration by bonus or penalty points. Distribution of CCSs of the volunteers and draftees is shown in Table 1.

Table 1
Distribution of Composite
Criterion Scores
(percent)

| Group | Composite Criterion Scores | | | | |
|-----------|----------------------------|-------|-------|-------|------|
| | 0-24 | 25-44 | 45-64 | 65-84 | 85+ |
| Volunteer | 4.0 | 6.0 | 13.4 | 48.9 | 27.7 |
| Draftee | 0.6 | 2.2 | 47.5 | 43.7 | 6.0 |

¹All subjects separated from active duty earlier than 90 days before normal time of separation were dropped from these analyses. However, those few men discharged early through court martial action were not dropped from the study, no further observation being needed to determine the unsatisfactory nature of their service, and CCS scores were assigned to them accordingly.

²Disciplinary action under Article 15 is not directly expressed in this score since no record of company punishment appears in the 201 file at the time of separation. Indirect expression of this factor may appear in conduct and efficiency ratings and in pay grade and time-in-grade.

Interpretation

Although the criterion score is a measure of the quality of the recruit's service, it is a composite of points from several sources and thus it is difficult to give specific meaning to the units of this measure. A difference of 20 CCS points corresponds to the difference between two adjacent pay grade levels—but may also arise from other sources. In Table 1 each column represents a range or interval of scores centered on a pay grade level. Typically, scores in the first column correspond to pay grade of E-1 or E-2; those in the second column to E-3; scores in the third column to E-4; and so forth.

The meaning of the criterion variable may also be illustrated by comparing the criterion scores of soldiers who are and are not eligible to reenlist upon completing their first duty tour. Although ineligibility to reenlist is included in the composite criterion, its maximum of seven penalty points does not bulk large in the total CCS distribution. Separate distributions of CCS for volunteers eligible and ineligible to reenlist for a second tour of duty are presented in Figure 1. Eligibility to reenlist was determined from the Reenlistment Eligibility (RE) Code awarded on separation from the initial duty tour. Excluded from this ineligible category were men barred from reenlistment for reasons considered to be without prejudice and not representing unsatisfactory service to the Army (primarily aliens and draftees with low aptitude scores). Parallel information for draftees is presented in Figure 2.

For either component there is little overlap between the CCS distributions for men eligible and not eligible to reenlist. The markedly higher criterion scores of the reenlistment eligibles supports the interpretation of the CCS as a more differentiated measure of the same evaluation of first tour service which the Army makes in its reenlistment decision.

Factors Affecting the CCS

The CCS was constructed with the goal of expressing the Army's evaluation of a soldier's entire first tour of duty, by use of the Army's standard administrative and personnel data—to reflect the balance of rewards and punishments meted out by the Army, rather than to establish nonstandard experimental objectives and measures. The heavy weighting of terminal pay grade in the CCS was in part dictated by the fact that no other combination of criterion variables provided sufficient differentiation among the subjects to reflect differential achievement. Moreover, even with allowance for the confounding produced by random differences in opportunity for promotion, the variable of pay grade was judged to reflect the area in which there was the greatest expression of discretionary judgment by the soldier's immediate commander. The host of factors contributing to the commander's recommendation for promotion is unknown, but it was taken to represent the summary, integrated evaluation of the total value of the soldier's service by the superior best able to make this judgment.

Over the first duty tour, differential pay grade achievement was necessarily limited by the time spent in individual MOS training and by time-in-grade requirements. Subsequent changes in promotion policy have doubtless acted to reduce this limitation. In our data of 1961-1964, 87% of the draftee sample was divided almost evenly between grades E-3 and E-4. Greater differentiation occurred over the extra year of the volunteer's service, with 64% falling in these two terminal pay grades and an additional 25% ending the first tour in the grade of E-5. Application of the CCS to men with a longer period of service would be expected to yield a more differentiated measure of the Army's evaluation of their service.

Distribution of CCS for Volunteers Eligible and Not Eligible to Reenlist

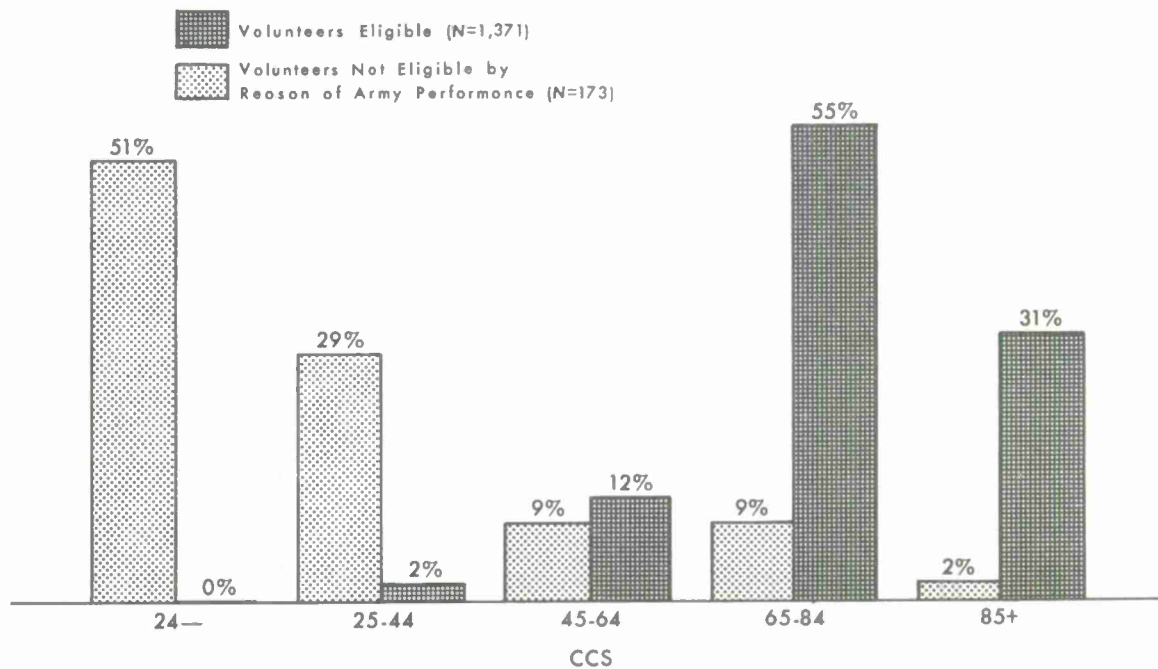


Figure 1

Distribution of CCS for Draftees Eligible and Not Eligible to Reenlist

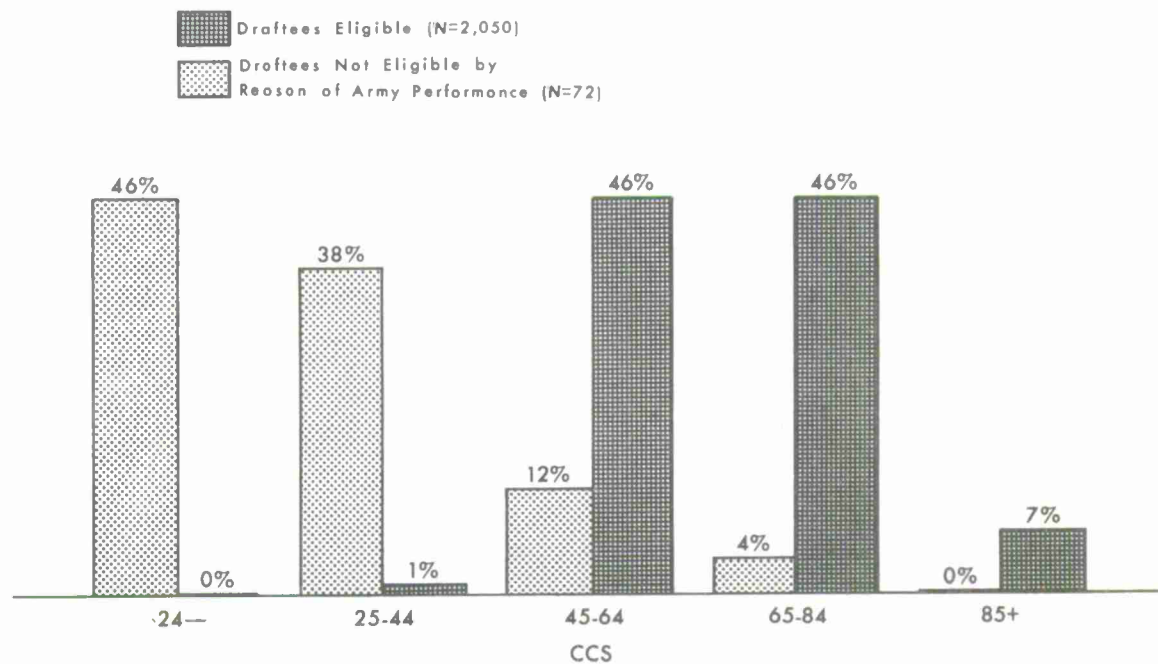


Figure 2

Two indirect factors reflected in the CCS must be considered: (a) differential opportunity for promotion as a function of pre-service characteristics, and (b) the effects of disciplinary action late in the tour obscuring previously satisfactory service.

It is possible that the higher terminal pay grade typically attained by recruits in the higher aptitude range is a result of classification policies that selectively place higher aptitude recruits in MOSs with greater opportunity for promotion. The data of this study have proven refractory to all attempted analyses in terms of assigned MOS, duty MOS, or Army School System training (with higher aptitude qualifications) vs. the less specialized ATC training (with less demanding aptitude requirements). In these data the question of whether higher aptitude men outstrip lower aptitude men in the same MOS remains moot. Even though the more technical MOSs do have a higher grade ceiling before supervisory-command qualities become dominant, relatively few men can qualify for these higher grades in their first tour. This factor would become of increasing importance in more extended service and would have least effect in the draftee data of this study. Few otherwise qualified draftees are trained in the more advanced technical areas because of insufficient service time remaining after the extensive training.

Duty assignments of subjects in the follow-up study of recruits were in no way controlled, and differential promotion opportunity was regarded as randomized or at least representative of Army practice at that time. Whatever the classification practices were, and whatever effects these had on promotion opportunity, the CCS was designed to measure the Army's de facto evaluation of the recruit's first duty tour as expressed primarily in his terminal pay grade. Relationships between pre-service recruit characteristics and this criterion would therefore measure the effects of general Army promotion practices at the time of the study, regardless of the equality or inequality of promotion opportunity.

The use of terminal pay grade as the major constituent element in the CCS has the effect of assigning a low evaluation to those men who have been reduced in grade by the end of their first tour, regardless of the quality of their earlier service. This choice was deliberate and was felt to best express the Army's evaluation of the soldier's cumulative contribution to the service at the end of the first tour. Looking forward from that time, the Army does consider this factor in projecting the likely value of the soldier's future service as expressed in reenlistment recommendations.

The greatest value of using terminal pay grade was judged to be the effect it gave to the commander's discretionary action in disciplinary grade reduction under company punishment, no other evidence of which appeared in records available at termination of service. Disciplinary grade reduction expresses a major negative evaluation of a soldier's performance which is taken into consideration in establishing the quality of the soldier's total performance. Without the use of terminal pay grade, only those aggravated cases resulting in grade reduction by court-martial action could be detected. It was the experimenter's judgment that terminal pay grade reflected, better than any other available datum, the net, effective, summarized evaluation of recruit's service to the Army at the end of his first tour.

In summary, the CCS was judgmentally constructed, using existing Army personnel data routinely generated by Army administrative actions, to measure then existing Army practices in awarding differential pay, prerogatives, responsibilities, and recognition as the Army's manifest evaluation of the total quality to date of the soldier's service.

RESULTS

REPRESENTATIVENESS OF SAMPLE

Although the percentage of returns of Summary of Service forms (47% of the volunteers; 66% of the draftees) compares favorably with general experience in mail surveys, either military or civilian, there was a large absolute percentage of nonreturns.

Using 46 variables selected from every category of the original study's end-of-BCT administrative and questionnaire data, subjects whose follow-up Summary of Service forms were returned were compared with those whose forms were not returned. On the basis of the fact that differences within each component were inconsequential and differences between components did not show a meaningful pattern, the subsample of subjects for whom follow-up data were received was considered to be representative of the basic sample of BCT graduates used in this study.

PROCEDURE AND FORMAT

Results are presented in a standard format which shows the relationship between a recruit characteristic variable, measured by the end of BCT, and the criterion assessing the quality of subsequent first tour service.

Each recruit characteristic variable was split into three levels so as to best approximate a top quarter, middle half, and bottom quarter of the variable. The numbers of subjects falling at each level of the variable are shown in the various tables. Use of the same cutting points for the separate analyses for draftees and volunteers insures that the levels of the recruit characteristic variable remain constant for both components. As can be seen by inspection of Ns, on some variables the distribution differs markedly between the two components.

A similar attempt was made to trichotomize the criterion into three levels of top quarter, middle half, and bottom quarter. This was accomplished for the volunteer sample by defining the bottom quarter as criterion scores of 59 and below (essentially E-3 and lower), the middle half as the score range of 60-79 (basically E-4 terminal grade), and the top quarter as 80 or higher (primarily E-5 and above). As indicated in Figure 1, no such distribution of criterion scores was possible for the draftee sample. Since nine-tenths of the draftee sample was clustered within a few points of 55 or 75, the basic E-3 and E-4 criterion scores, there was no meaningful, or even possible way to approximate the desired distribution of top quarter, middle half, and bottom quarter. Therefore, the same cutting points were used for the draftee criterion trichotomy as for the volunteer sample. This decision placed approximately 29% of the volunteers in the top group, 48% in the middle, and 23% at the bottom level. The corresponding distribution for the draftee sample was 7%, 43%, and 50%.

The results of this study are presented in a standard nine-cell table formed by three levels of the recruit characteristic variable in conjunction with three levels of the CCS. The entry in any cell is the percentage of all subjects at that recruit characteristic level who fall at that level of criterion score. Because of the marked difference between the criterion distributions for draftees and volunteers, arising from the two-year vs. three-year term of service, all analyses are presented as separate, parallel analyses for the two components.

In the analyses all available data have been used. Sample size for each level of a recruit characteristic is listed under N. Minor fluctuations in N stem from

randomly missing data. In the initial data collection of TRANSITION I, the Basic Training Survey was administered to half the subjects under anonymous conditions. Since these subjects cannot be individually identified, their data are missing from all analyses in which the recruit characteristic variable was measured by the survey questionnaire.

PRE-SERVICE CHARACTERISTICS

This section presents the relationships between the criterion variable and the age, education, and GT of the recruits on their entering the Army. These three variables represent readily accessible and routinely assessed characteristics of Army input and remain essentially unaffected by Army experience.

The relationship between the General Technical (GT) aptitude area scores and the composite criterion is shown in Table 2. The tabulation on the left presents data for volunteers. Of the 435 volunteers with GT of 124 or greater, 12% were in the low criterion group, 43% in the middle criterion group, and the remaining 45% in the high criterion group. Of the 922 volunteers at the GT level between 96 and 123, 25% were in the low criterion group, 50% in the middle group, and 25% in the high criterion category. Of the 238 volunteers with GT of 95 or below, 36% were in the low, 51% in the middle, and 13% in the high criterion groups.

Table 2
Relationship Between GT and Criterion

| VOLUNTEERS | | | | | DRAFTEES | | | |
|------------|------------|-------|------------|-------------|------------|-------|------------|------|
| N | Criterion | | | GT LEVELS | Criterion | | | N |
| | 59 or Less | 60-79 | 80 or More | | 59 or Less | 60-79 | 80 or More | |
| 435 | 12% | 43% | 45% | 124 or more | 33% | 53% | 14% | 541 |
| 922 | 25% | 50% | 25% | 96-123 | 50% | 44% | 6% | 1139 |
| 238 | 36% | 51% | 13% | 95 or Less | 67% | 31% | 2% | 641 |

$\chi^2 = 112.6, 4\text{ df}, p < .001$

$\chi^2 = 178.8, 4\text{ df}, p < .001$

$$\chi^2 = 112.6, 4 \text{ df}, p < .001$$

$$\chi^2 = 178.8, 4 \text{ df}, p < .001$$

The data may also be read vertically, showing that the low criterion group was composed of 12% of the volunteers at the high GT level, of 25% at the middle GT level, and of 36% at the low GT level. Similarly, the high criterion group of men with a criterion score of 80 or above was comprised of 45% of the high GT volunteers, 25% of the middle GT volunteers, and only 13% of the low GT volunteers. In each successively lower level of GT, there was a decreasing percentage of volunteers with high criterion scores and an increasing proportion of men in the low criterion group.

The tabulation on the right in Table 2 presents parallel data for draftee subjects, using the same GT levels and criterion groups. As noted earlier, the proportion of draftee subjects at each GT level and in each criterion group differed from those for the volunteers. Thus, only a small proportion of draftees at any level earned a criterion score of 80 or above (roughly E-5 terminal pay grade level) in their two-year duty tour. The two tabulations were constructed on the same basis and present separate, parallel analyses of the relationships for volunteers and draftees, although they cannot be compared.

The wide range of GT in the samples permits a more detailed and differentiated analysis of the relationship between GT and the CCS. In Figure 3 GT has been divided into nine functionally equal size intervals and the average criterion score plotted for men at each GT level. For both volunteers and draftees, average criterion score increases at each successively higher GT level. Again, results for the two components cannot be compared.

Mean CCS for Volunteers and Draftees by GT

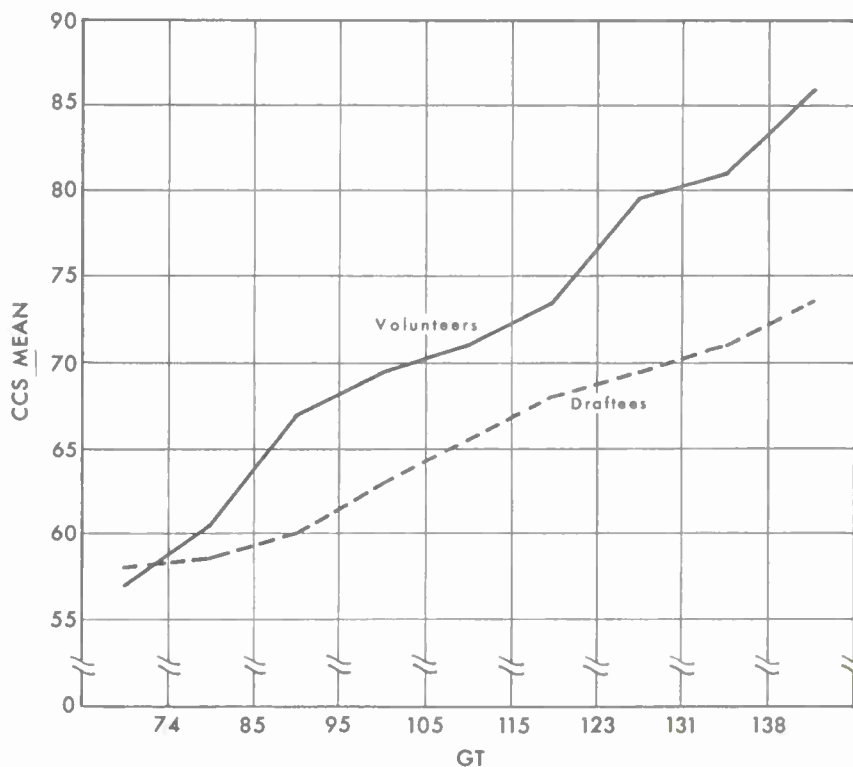


Figure 3

The relationship between years of education completed on entering the Army and the composite criterion is presented in Table 3.

Table 3

Relationship Between Education and Criterion

| VOLUNTEERS | | | | DRAFTEES | | | |
|------------|------------|-------|------------|------------------|------------|-------|------------|
| N | Criterion | | | EDUCATION LEVELS | Criterion | | |
| | 59 or Less | 60-79 | 80 or More | | 59 or Less | 60-79 | 80 or More |
| 450 | 11% | 43% | 46% | 13 or More | 37% | 51% | 12% |
| 731 | 19% | 54% | 27% | 12 | 54% | 42% | 4% |
| 398 | 43% | 43% | 14% | 11 or Less | 66% | 31% | 3% |

$$\chi^2 = 179.1, 4 df, p < .001$$

$$\chi^2 = 141.3, 4 df, p < .001$$

The relationship between age on entering the Army and the criterion is shown in Table 4.

Table 4

Relationship Between Age and Criterion

| VOLUNTEERS | | | | AGE LEVELS | DRAFTEES | | | |
|------------|---------------|-------|---------------|---------------|----------|---------------|-------|---------------|
| N | Criterion | | | | N | Criterion | | |
| | 59 or Less | 60-79 | 80 or More | | | 59 or Less | 60-79 | 80 or More |
| 113 | 12% | 43% | 45% | 23 or More | 47% | 45% | 8% | 910 |
| 206 | 16% | 47% | 37% | 20-22 | 59% | 34% | 7% | 116 |
| 404 | 31% | 52% | 17% | 19 or Less | 71% | 25% | 4% | 51 |

$\chi^2=52.7, 4\text{ df}, p<.001$
 $\chi^2=14.8, 4\text{ df}, p<.01$

$$\chi^2 = 52.7, 4 \text{ df}, p < .001$$

$$\chi^2 = 14.8, 4 \text{ df}, p < .01$$

EARLY SERVICE CHARACTERISTICS

The second category of results is presented in terms of the relationship between CCS and several recruit characteristics describing the recruit in the initial portion of his service: BCT performance, evaluation by his BCT fellow trainees, and his early attitudinal reactions to the Army and to the likelihood of extended service.

BCT Proficiency

This section presents the relationships between the composite criterion and measures of BCT proficiency: Graded Proficiency Test (ATT 21-2), Physical Combat Proficiency Test, and weapons qualification score. These relationships were studied to determine the consistency of performance during recruit training and in subsequent service over the first duty tour. The recruit's responsibilities in BCT are narrowly defined and are measured by standard proficiency tests. In subsequent duty assignments, responsibilities vary widely and are measured by administrative actions reflected in the criterion. The question of interest is how well BCT proficiency predicts the satisfactoriness of later service in the trainee's MOS and unit assignment.

The relationship between the BCT Graded Proficiency Test (GPT), administered at the end of BCT, and the composite criterion is presented in Table 5. Although the single form of the BCT Graded Proficiency Test in use in 1961 was far less demanding and comprehensive than current ATT versions, proficiency in BCT content was related in these data to quality of performance in subsequent assignments. Of the volunteers high in BCT proficiency, only 16% fell in the lowest criterion group and 37% in the high criterion groups, while the corresponding values for men with lowest BCT proficiency were 34% and 16%.

The relationship between scores on the Physical Combat Proficiency Test (PCPT) conducted near the end of BCT and the composite criterion is shown in Table 6. No relationship was found between PCPT scores and the criterion. Although the scores obtained on PCPT would be regarded as unsatisfactory under present training procedures and assessment standards, they were neither atypical nor unsatisfactory at the time they were obtained.

Table 5

Relationship Between GPT and Criterion

| VOLUNTEERS | | | | GPT LEVELS | DRAFTEES | | | |
|------------|---------------|-------|---------------|---------------|----------|---------------|-------|---------------|
| N | Criterion | | | | N | Criterion | | |
| | 59 or Less | 60-79 | 80 or More | | | 59 or Less | 60-79 | 80 or More |
| 362 | 16% | 47% | 37% | 91 or More | 46% | 45% | 9% | 497 |
| 841 | 20% | 50% | 30% | 83-90 | 48% | 45% | 7% | 1224 |
| 261 | 34% | 50% | 16% | 82 or Less | 64% | 34% | 2% | 475 |

$\chi^2 = 46.9, 4\text{ df}, p < .001$
 $\chi^2 = 47.7, 4\text{ df}, p < .001$

$$\chi^2 = 46.9, 4 \text{ df}, p < .001$$

$$\chi^2 = 47.7, 4 \text{ df}, p < .001$$

Table 6

Relationship Between PCPT and Criterion

| VOLUNTEERS | | | | PCPT LEVELS | DRAFTEES | | | |
|------------|---------------|-------|---------------|----------------|----------|---------------|-------|---------------|
| N | Criterion | | | | N | Criterion | | |
| | 59 or Less | 60-79 | 80 or More | | | 59 or Less | 60-79 | 80 or More |
| 275 | 19% | 52% | 29% | 281 or More | 56% | 37% | 7% | 300 |
| 549 | 23% | 48% | 29% | 205-280 | 50% | 44% | 6% | 896 |
| 236 | 27% | 44% | 29% | 204 or Less | 52% | 41% | 7% | 385 |

$$\chi^2 = 5.1, 4 \text{ df}, \text{Not Significant}$$

$$\chi^2 = 4.1, 4 \text{ df}, \text{Not Significant}$$

The relationship between weapons qualification firing in BCT and the criterion is shown in Table 7. In the volunteer sample a relationship approaching significance was found between weapons performance and the criterion, suggesting possible consistency between this area of BCT performance and the quality of later service. There was no relationship between BCT weapons scores and the criterion in the draftee sample.

Table 7

Relationship Between Weapons Performance and Criterion

| VOLUNTEERS | | | | WEAPONS LEVELS | DRAFTEES | | | |
|------------|---------------|-------|---------------|-------------------|----------|---------------|-------|---------------|
| N | Criterion | | | | N | Criterion | | |
| | 59 or Less | 60-79 | 80 or More | | | 59 or Less | 60-79 | 80 or More |
| 42 | 15% | 45% | 40% | Expert | 45% | 50% | 5% | 44 |
| 223 | 21% | 45% | 34% | Sharpshooter | 53% | 40% | 7% | 241 |
| 581 | 25% | 50% | 25% | Marksman | 52% | 41% | 7% | 796 |
| 77 | 26% | 42% | 32% | Unqualified | 50% | 42% | 8% | 102 |

$$\chi^2 = 12.3, 6 \text{ df}, p < .10$$

$$\chi^2 = 1.2, 6 \text{ df}, \text{Not Significant}$$

Sociometric Choice

Two sociometric or peer ratings were obtained as part of the questionnaire survey at the end of BCT.

The friendship variable represents the number of times a trainee was chosen by the other members of his platoon on the following item:

Of all the men in your platoon, which eight men have you come to know best - that is, who are your best friends? From the roster of men in your platoon, pick out eight who are your best friends and write their *numbers* on the lines below. Put the number of your closest friend on the first line, the number of your next closest friend on the next line, and so forth. Be sure to put a number on each of the eight lines.

The relationship between friendship choices received and the criterion is presented in Table 8.

Table 8
Relationship Between Friendship Choices Received
and Criterion

| VOLUNTEERS | | | | DRAFTEES | | | | |
|------------|------------|-------|------------|--------------------|------------|-------|------------|-----|
| N | Criterion | | | FRIENDSHIP CHOICES | Criterion | | | N |
| | 59 or Less | 60-79 | 80 or More | | 59 or Less | 60-79 | 80 or More | |
| 200 | 17% | 47% | 36% | 10 or More | 42% | 48% | 10% | 356 |
| 265 | 21% | 49% | 30% | 6-9 | 53% | 40% | 7% | 450 |
| 303 | 32% | 49% | 19% | 5 or Less | 55% | 40% | 5% | 343 |

$\chi^2 = 26.5, 4 \text{ df}, p < .001$
 $\chi^2 = 15.1, 4 \text{ df}, p = .01$

$$\chi^2 = 26.5, 4 \text{ df}, p < .001$$

$$\chi^2 = 15.1, 4 \text{ df}, p < .01$$

The prestige respect variable represents the number of times a trainee was chosen by other members of his platoon on this item:

Of all the men in your platoon, which five do you respect the most; that is, whose opinions would you pay most attention to on some important question? From the list of men in your platoon, pick out the five whom you respect the most and write their numbers on the lines below. Put the number of the man whom you respect most on the first line, the number of the man whom you respect next most on the second line, and so forth. Be sure to put a number on each of the five lines.

The relationship between respect choices received and the criterion is presented in Table 9.

For both components and both bases of choice, the findings show the positive relationship between the evaluation accorded a BCT trainee by his fellow platoon members and the evaluation placed on his later performance by his leaders and supervisors. The relationship was clearly stronger in the case of the prestige-respect judgment than in that based on friendship, respect judgments being concentrated on a much smaller portion of the platoon than the friendship choices.

These peer ratings differ from those used in the selection for the Leader Preparation Course, in that they call for judgment based on present behavior rather than that expected in a hypothetical, future situation and in that they call for selection of a limited number of platoon members, rather than a rating of all.

Table 9

**Relationship Between Respect Choices
Received and Criterion**

| VOLUNTEERS | | | | RESPECT CHOICES | DRAFTEES | | | |
|------------|------------|-------|------------|-----------------|------------|-------|------------|-----|
| N | Criterion | | | | Criterion | | | N |
| | 59 or Less | 60-79 | 80 or More | | 59 or Less | 60-79 | 80 or More | |
| 174 | 15% | 38% | 47% | 5 or More | 39% | 47% | 14% | 389 |
| 226 | 21% | 51% | 28% | 2-4 | 47% | 47% | 6% | 408 |
| 375 | 29% | 52% | 19% | 1 or Less | 63% | 34% | 3% | 368 |

$\chi^2 = 49.8, 4 \text{ df}, p < .001$
 $\chi^2 = 62.0, 4 \text{ df}, p < .001$

$$\chi^2 = 49.8, 4 \text{ df}, p < .001$$

$$\chi^2 = 62.0, 4 \text{ df}, p < .001$$

Attitude

A great variety of variables measuring attitudes, both specific and general, toward the Army were collected in the early phase of this research, at the end of BCT. All these attitude measures are moderately positively intercorrelated and, as a set, they present a consistent picture of a slight to moderate relationship with the criterion. TRANSITION Attitude III (TA-III) is a 22-item composite of these several attitude measures, including 15 selected items used in previous HumRRO research on Work Unit NCO and the development of the Drill Sergeant program. TRANSITION Attitude III is measured by the recruit's degree of agreement with such statements as "The discipline you get in the Army is good for you" and by the favorableness of his ratings of the U.S. Army, most Army sergeants, life as a soldier, Army rules and regulations, and so on. Its relationship with the criterion is shown in Table 10.

Table 10

**Relationship Between TRANSITION Attitude III
and Criterion**

| VOLUNTEERS | | | | ATTITUDE LEVELS | DRAFTEES | | | |
|------------|---------------|-------|---------------|--------------------|---------------|-------|---------------|-----|
| N | Criterion | | | | Criterion | | | N |
| | 59 or Less | 60-79 | 80 or More | | 59 or Less | 60-79 | 80 or More | |
| 184 | 29% | 51% | 20% | Favorable | 56% | 40% | 4% | 191 |
| 416 | 23% | 47% | 30% | Neutral | 51% | 40% | 9% | 574 |
| 104 | 17% | 50% | 33% | Unfavorable | 11% | 51% | 8% | 286 |

$\chi^2 = 8.0, 1 \text{ df}, p = .010$
 $\chi^2 = 18.31, 1 \text{ df}, p = .001$

$$\chi^2 = 8.0, 4 \text{ df}, p = .10$$

$$\chi^2 = 18.31, 4 \text{ df}, p = .01$$

The relationship between the variable of Career Orientation and the composite criterion is presented in Table 11. Career Orientation was defined by the joint response pattern to these two questions asked at the end of BCT:

1. If things work out well for you in the Army, what are the chances that you will reenlist when your present tour is finished?
2. Would you have enlisted in the Army if there had been no draft?

Table 11
Relationship Between Career Orientation
and Criterion

| VOLUNTEERS | | | | CAREER ORIENTATION LEVELS | DRAFTEES | | | |
|------------|---------------|-------|---------------|---------------------------------|----------|---------------|-------|---------------|
| N | Criterion | | | | N | Criterion | | |
| | 59 or Less | 60-79 | 80 or More | | | 59 or Less | 60-79 | 80 or More |
| 234 | 34% | 48% | 18% | | High | 61% | 35% | 4% |
| 291 | 20% | 50% | 30% | Neutral | 55% | 38% | 7% | 323 |
| 179 | 14% | 49% | 37% | Low | 46% | 46% | 8% | 690 |

$\chi^2 = 34.4, 4\text{ df}, p < .001$
 $\chi^2 = 11.4, 4\text{ df}, p < .05$

$$\chi^2 = 34.4, 4 \text{ df}, p < .001$$

$$\chi^2 = 11.4, 4 \text{ df}, p < .05$$

For the volunteer sample with TRANSITION Attitude III, differences approached significance. For both components with the Career Orientation variable, the relationships with the criterion were statistically significant. Unlike all the other findings, these relationships were negative in that the more favorable the attitude, or the higher the Career Orientation, the greater was the proportion of recruits in the low criterion group. Thus, the low criterion group contained 34% of the high Career Orientation volunteers but only 14% of those with low Career Orientation. Corresponding values for the draftee sample were 61% and 46%. This finding was consistent throughout all the attitude variables.

COMBINED CHARACTERISTICS

To this point, the findings presented have been the relationships between the criterion and each recruit characteristic. Each recruit characteristic variable has its own operationally independent definition; each relationship singly has its own empirical validity. This section presents findings on the interrelationships among the variables and on the association between the recruit characteristics in combination and the criterion.

Many distributional characteristics of these data, as well as the research design itself, unavoidably and strongly blunt the effectiveness of a correlational analysis. This is true because the full range on a variable for recruits in the Army at that time is reduced for analysis (reducing correlations) by the need for separating statistical treatment of volunteers and draftees. In addition, the power and interpretation for correlations is attenuated by sharply skewed distribution. Nevertheless, correlations would give some picture, albeit an attenuated underestimate, of the effects of the combined characteristics, so the analyses were performed. The Pearson Product-Moment Correlation Coefficients expressing the relationship between each single recruit characteristic variable and the criterion are presented in Table 12.

These correlations are consistent with the findings as presented earlier in the report. Using analysis of covariance, all findings reported in Tables 3-11 were reexamined, with the effects of GT removed from the relationship. For the draftee sample, the relationships of CCS to TA-III and to Career Orientation dropped below statistical significance; all other relationships between single recruit variables and CCS which were significant without control of the effects of GT remained so, although somewhat attenuated, when the effects of GT were taken into account.

Table 12
Correlations Between Single Recruit Characteristics and Criterion

| Component | GT | Education | Age | GPT | Friendship | Respect | Career Orientation | Attitude |
|-----------|-----|-----------|-----|-----|------------|---------|--------------------|----------|
| Volunteer | .29 | .34 | .27 | .18 | .19 | .21 | -.17 | -.09 |
| Draftee | .31 | .26 | .17 | .16 | .12 | .23 | -.12 | -.06 |

Table 13
Matrix of Intercorrelations Between Recruit Characteristics and
Criterion for Volunteers and Draftees^a

| Variable | CCS | TA-III | C.O. | Friendship | Respect | GPT | GT | Age |
|--------------------|-----|--------|------|------------|---------|-----|-----|-----|
| CCS | | | | | | | | |
| TA-III | .09 | | | | | | | |
| Career Orientation | | | | | | | | |
| Friendship | .17 | .47 | | | | | | |
| Respect | .19 | .06 | .08 | | | | | |
| GPT | .21 | .05 | .06 | .53 | | | | |
| GT | .18 | .04 | .09 | .13 | .15 | | | |
| Education | .29 | .19 | .22 | .13 | .27 | .31 | | |
| Age | .34 | .19 | .32 | .20 | .33 | .22 | .50 | |
| | .27 | .14 | .18 | .19 | .48 | .11 | .26 | .45 |
| CCS | | | | | | | | |
| TA-III | .06 | | | | | | | |
| Career Orientation | | | | | | | | |
| Friendship | .12 | .38 | | | | | | |
| Respect | .12 | .01 | .03 | | | | | |
| GPT | .23 | .08 | .07 | .56 | | | | |
| GT | .16 | .03 | .04 | .12 | .28 | | | |
| Education | .31 | .24 | .23 | .09 | .31 | .36 | | |
| Age | .26 | .23 | .26 | .19 | .32 | .23 | .56 | |
| | .17 | .10 | .29 | .10 | .16 | .08 | .17 | .15 |

^aIn these analyses, low numerical scores indicate high Career Orientation and positive attitudes toward the Army; all other variables are conventionally positively polarized.

The intercorrelations between recruit characteristics and the criterion are presented in Table 13 for volunteers and for draftees. Multiple correlation analysis showing the relationship of the optimally weighted combination of all recruit characteristic variables to the criterion yielded $R = .41$ for volunteers and .36 for draftees. These joint relationships must be considered as no more than low moderate in strength and indicate only a slight increase for the combined variables over those obtained with the most effective single variables.

The Beta weights assigned to each variable by the multiple correlation analysis are given in Table 14.

Table 14
Beta Weights for
Recruit Characteristics
(Multiple Correlation Analysis)

| Recruit Characteristic | Volunteers | Draftees |
|------------------------|------------|----------|
| GT | .1211 | .1939 |
| Education | .1721 | .0933 |
| Age | .1266 | .0921 |
| GPT | .0763 | .0289 |
| Friendship | .1119 | .0056 |
| Respect | .0126 | .1097 |
| Career Orientation | .0622 | .0358 |
| Attitude | .0223 | .0399 |

DISCUSSION

Two cautions must be observed in interpreting these findings:

(1) Although the same cutting points were used for draftees and volunteers to establish the three criterion groups, the high, middle, and low criterion groups were based on two different periods of performance in the Army (two years for draftees, three for volunteers) and have meaning as ranked groups relative to each other only within the data for either component alone. They cannot be compared.

(2) Although the same cutting points were used to establish the three levels of the recruit characteristic variable for each component, the distribution of volunteers over these three levels differed sharply, on occasion, from that for the draftees.

PRE-SERVICE CHARACTERISTICS

Despite their initially less favorable attitude toward the Army at the end of BCT, the older recruits who had a higher aptitude and were better educated progressed furthest in their first tour of duty. For volunteers, the low criterion group ending the first tour as E-3 or lower was composed of three times as many subjects with low as with high GT (36% vs. 12%); four times as many men with low as with high education (43% vs. 11%); and two and one-half as many younger as older men (31% vs. 12%). Correspondingly, the high criterion group of volunteers reaching E-5 or higher in the first tour was composed of more than three times as many men with high as with low GT (43% vs. 13%); three times as many men with education beyond high school as those not completing high school (46% vs. 14%); and two and one-half times as many older as younger recruits.

Although not so strong as in the case of the volunteers, parallel findings obtained for the relationship between the criterion and age, education, and GT in the draftee sample. The percentage of men at the low GT or educational levels who were in the low criterion group was twice that of men in the high level of GT or schooling. Similarly, the percentage of high GT or more highly educated men in the high criterion group was at least four times that of the lower aptitude and less well educated draftees. Fewer draftees than volunteers ended service at a level lower than E-3, and few progressed beyond E-4 in their shorter two-year tour. The clustering of their criterion scores at the E-3 and E-4 level resulted in lowered variability and differentiation among draftees, which acts to attenuate any relationships of the criterion with other variables. This effect was heightened in the instance of age where less than 11% of the draftees fell at the middle level and less than 5% at the bottom level.

EARLY SERVICE CHARACTERISTICS

In general, the characteristics used to describe behaviors of the recruit sample in their initial service (the period of BCT) are predictive of the evaluation of their subsequent service as measured by CCS.

Among the measures of BCT performance, only the end-of-cycle training test (GPT) showed a significant relationship to the criterion. This test sampled a variety of BCT skills and knowledge which were apparently representative of the learning problems encountered in the recruit's later service. There is no

indication in these data as to why PCPT and weapons performance were unrelated to quality of later service. Whatever the explanation, it appears that these two variables, regardless of their importance as specific military skills, were not reflected differentially in the Army's promotion and disciplinary practices at the time of this study. Using the greater variety of less specific measures encompassed in the GPT, there is demonstrated consistency between the degree of excellence of BCT and later behavior in the soldier's duty performance.

The sociometric data are indirect measures of a recruit's early performance in that they reflect the evaluation of the soldier made by the fellow members of his training platoon. The training platoon constitutes almost the total social environment for the trainee during BCT. Even with peer choices made after only five weeks of this intensive association, there is again consistency between friendship and particularly respect choices received by recruits from their platoon mates and the judgments passed on them by their superiors in the miscellany of their later assignments.

Unlike the other recruit characteristic measures, the attitudinal variables represent the only private, direct, evaluative responses of the recruit to the Army available in this study. Given the variety of random experiences which the subjects underwent subsequent to their limited Army experience in BCT when attitude data were collected, it is surprising that the initial attitudes are at all predictive of CCS. The pattern is consistent over the several attitude measures analyzed; the more favorable the early attitude toward specific or general aspects of the Army, the lower the CCS value assigned to later performance. The problem of the complex relationship between age, education, GT, and attitudes is discussed in the section covering Combined Characteristics.

COMBINED CHARACTERISTICS

For a variety of technical reasons, the correlational measures underestimated, to an unknown degree, the true magnitude of the relationships reported. The criterion itself is multimodal; although consistently monotonic, many of the bivariate distributions are sharply nonlinear. Several of the recruit characteristics variables are strongly skewed in opposite directions for volunteers and draftees.

Among the single variable relationships, the association with CCS is greatest for GT and for education. With the effects of GT removed, most of the other Pre-Service and Early Service variable relationships with the criterion remained significant, although slightly diminished. In these data, GT was a contributor, though not a dominant one, to the pattern of consistency between recruit characteristics and Army evaluation of later service.

No clear interpretation can be offered of the findings on the joint relationship of the recruit variables with the CCS. The relatively small gain obtained by pooling the recruit variables provides very little support for the interpretation that each recruit characteristic was associated with or predictive of a separate and independent portion of criterion behavior. On the other hand, except for the correlations between GT and education, and between the two sociometric scores, the low intercorrelations in these data among recruit characteristics do not suggest that the several scores are at all substantially measures of a single common, underlying variable. Within the heavy limitations noted, these findings give a general indication of the combinatorial effects of the variables under the Army policies and practices of 1961-1964. More

specific and precise information requires research of a more appropriate design and with data generated under current conditions.

SUMMATION

These data were collected on the high quality Army input of 1961, and these recruits performed their service under administrative and personnel policies, as well as world conditions, which have radically changed since then. It is impossible to gauge the net effect of the multitudinous changes in selection, training, promotion, and assignment which now prevail. Other things being equal, the effect of increasing the range of the recruit characteristics observed in 1961 would be to increase the degree of the relationships observed in this study, but to obtain parameter values applicable to today's conditions would require a current study. This research indicated some relevant variables and provides a prototype of a criterion which would facilitate such a study, undertaken as an administrative rather than as a research effort when current information is desired.

The study was undertaken to determine whether any relationship did exist between early available information on recruit characteristics and the contribution of recruits' first tour service as measured by standard Army administrative actions. The parallel analyses lend credence to whatever relationships are observed within both of the internally homogeneous but different component samples.

While, from the data of this study, the empirical predictive value of several single recruit characteristics has been shown, neither theoretical nor practical questions about combined effects can be adequately answered. In addition, however desirable they may be, comparisons of effects between volunteers and draftees in this study were not attainable. The one-year (50%) difference in length of service between volunteers and draftees rendered their criterion scores incommensurate and necessitated separate analyses for the two; the marked differences in age and education between draftees and volunteers also dictated separate, parallel analyses to avoid confounding the findings regarding effects of background variables and service component.

The TRANSITION research has taken as its criterion the recruit's entire first-tour performance as evaluated by standard Army administrative actions under unselected and uncontrolled Army conditions. The findings are that, in general, the men who measured up best by this criterion were the recruits who were older, better educated and of higher aptitude. They were the recruits who were evaluated more highly in BCT both by their peers and by the Army Training Test and who had an early disinclination to career service. These data are consistent with research in the other services.

A striking thing in these data is the continuity and consistency of the behavior of these men. In general, the men who learned more from and made better progress in their school-oriented world before entering the Army did better in BCT and continued to be more successful throughout their first, and typically single, tour of duty.

The primary value of these findings would seem to be the information provided on the relationship between a variety of recruit variables and the recruit's subsequent success in the Army.

APPENDICES

Appendix A

INSTRUCTIONS ABOUT FOLLOW-UP QUESTIONNAIRE

A SUSPENSE ACTION

IS DUE ON THIS MAN AS INDICATED IN INSTRUCTIONS BELOW.

DO NOT DESTROY THIS FORM UNTIL ALL REQUIREMENTS HAVE BEEN COMPLETED.

Name

Service No.

INSTRUCTIONS TO CUSTODIAN OF PERSONNEL RECORDS:

1. This man is a member of a group being studied by the Human Resources Research Office, The George Washington University, as a part of a research project sponsored by DCSPER, D/A.

2. The attached letter and set of forms (HumRRO TRANS. I-1 and I-2) have been placed in this man's Personnel Records Jacket and are not to be removed from this Jacket until the required suspense action has been completed. These instructions supersede the provisions of paragraph 2, AR 640-10, for these documents only. (See attached letter).

3. These forms will be completed as soon as this man's PERIOD OF COMMITTED ACTIVE DUTY IS TERMINATED IN ANY WAY, INCLUDING:

- a. RELEASE FROM ACTIVE DUTY TO RESERVE STATUS
- b. SEPARATION FROM SERVICE FOR PURPOSE OF CONTINUING ACTIVE DUTY (but NOT including voluntary or involuntary extension)
- c. DISCHARGE.

4. Forward completed forms directly to:

U.S. Army Leadership Human Research Unit
Post Office Box 787
Presidio of Monterey
California

Attention: TRANSITION

5. When the required action has been completed, this Suspense Action, Cover Sheet and attached letter will be removed from the Personnel Records Jacket and destroyed.

U.S. ARMY LEADERSHIP HUMAN RESEARCH UNIT
U.S. CONTINENTAL ARMY COMMAND
P.O. BOX 767
PRESIDIO OF MONTEREY, CALIFORNIA

A FIELD UNIT OF
THE GEORGE WASHINGTON UNIVERSITY
HUMAN RESOURCES RESEARCH OFFICE
OPERATING UNDER CONTRACT WITH
THE DEPARTMENT OF THE ARMY
HUMRRO

TELEPHONE
MONTEREY FRONTIER 5-1511
EXTENSION 249

1 October 1961

SUBJECT: RESEARCH FORMS - HumRRO TRANS I-1 and I-2

TO: Commanding Officer of EM named on attached documents.

1. Under sponsorship of Deputy Chief of Staff for Personnel, Department of the Army, this Unit is conducting a study of a special group of enlisted men who are being followed from their reception into the Army to the end of their current term of service. Information supplied on the attached forms will be related to information supplied by the men themselves during the period of their recruit training. The man named herein is a member of this special group.

2. By authority from Department of the Army direct to this Unit (UNCLAS DA MSG 574374, AGPF-E, 262049Z Sept 61), provisions of paragraph 2, AR 640-10 have been waived for the purpose of this study. This letter and attached documents will be retained in this man's Personnel Records Jacket until the required suspense action has been completed.

3. The suspense date for this action will depend upon the date of completion of the EM's current period of active duty, as indicated on the Suspense Action Cover Sheet and in the Instructions on the cover of the Summary of Service (HumRRO TRANS I-1). Completion of the Summary of Service will be the responsibility of the Personnel Officer having custody of EM's records at the time of separation and will be accomplished before EM is separated. No interview will be necessary. All required information can be obtained from documents in the man's Personnel Records Jacket.

4. Disposition of the Report of Reenlistment (HumRRO TRANS I-2) will be governed by Instructions in the Summary of Service (HumRRO TRANS I-1).

5. Information on these forms will be used for research purposes only. As soon as this suspense action has been completed, this letter and accompanying Suspense Action Cover Sheet will be removed from this Jacket and destroyed.

FOR THE CHIEF:



BETTY K. KUNERT
Major, WAC
Executive Officer

Appendix B

FOLLOW-UP QUESTIONNAIRE

SUMMARY OF SERVICE

Name

Service No.

1. This Summary of Service will be completed AS SOON AS THIS EM's CURRENT TERM OF COMMITTED ACTIVE DUTY IS TERMINATED IN ANY WAY, INCLUDING:

- a. RELEASE FROM ACTIVE DUTY TO RESERVE STATUS
- b. SEPARATION FROM SERVICE FOR PURPOSE OF CONTINUING ACTIVE DUTY
(but NOT including voluntary or involuntary extension.)
- c. DISCHARGE

2. Completion of this form will be the responsibility of the Personnel Officer having custody of EM's records at time of separation and will be accomplished before EM is separated.

3. The last page of this form may be used if insufficient space is provided for answering any item.

4. Completed forms will be forwarded to:

U.S. Army Leadership Human Research Unit
Post Office Box 787
Presidio of Monterey
California

Attention: TRANSITION

5. Disposition of the attached Report of Reenlistment (HumRRO TRANS I-1) will be governed by instructions on page 3 of this Summary of Service.

HumRRO TRANS I-1

1. Primary MOS _____ 2. Proficiency Test Score (if any) _____
3. Last duty MOS _____ 4. Assigned at last duty MOS for _____ months.
5. Grade _____ 6. Time in this grade _____ months.
7. Promotion qualification score (if any) _____.
8. Last three (3) Conduct ratings: _____, _____, _____.
9. Last three (3) Efficiency ratings: _____, _____, _____.
10. Awards and commendations: (Circle and/or list any applicable)
Good Conduct medal, Certificate of Achievement, letter of commendation,
other (except weapons qualifications badges) _____

11. Courts Martial Convictions: (give date, type, charge, and sentence)

12. Service Schools: (List only schools appearing in DA Pam 20-21)

13. Reason for termination of current period of committed active duty.
(check one and complete as appropriate)
____ Released from active duty to reserve status.
____ Enlisted or reenlisted for _____ years.
____ Board action (specify) _____

____ Court Martial Action (include details under Question 11)
____ Other type of separation (specify) _____

14. Date of separation _____

15. Was EM's active duty tour which began in 1961 extended in any way?

_____ NO

_____ YES, involuntary extension of _____ months for reasons of:

_____ YES, voluntary extension of _____ months for purpose of _____

16. If EM did NOT reenlist immediately, is he eligible for reenlistment
(Check one and complete as appropriate.)

_____ YES, Reenlistment Code RE-1 _____ NO, Reenlistment Code RE-3A

_____ NO, Reenlistment Code RE-2 _____ NO, Reenlistment Code RE-3B

_____ NO, Reenlistment Code RE-2A _____ NO, Reenlistment Code RE-4A

_____ NO, other reasons (specify) _____

* * * * *

I N S T R U C T I O N S

DISPOSITION OF REPORT OF REENLISTMENT (HumRRO TRANS I-2)

1. If EM is eligible for reenlistment, staple the attached Report of Reenlistment form securely to the copy of DA Form 1811 which is issued to him.

2. In all OTHER cases, the attached Report of Reenlistment form will be returned, uncompleted, with this Summary of Service Form.

3. When this suspense action has been completed, cross out the stamped notice regarding those forms on the face of the Personnel Records Jacket.

| | |
|---|--------------------------------|
| Typed name, grade, and organization of Personnel Officer | Signature of Personnel Officer |
|---|--------------------------------|

1 October 1961

SUBJECT: Report of Reenlistment (HumRRO TRANS I-2)

TO: Recruiting Officer receiving enlistment application from:

Name

Service No.

1. Under sponsorship of Deputy Chief of Staff for Personnel, Department of the Army, this Unit has been conducting a study of a special group of Army enlisted men, of which the man named above is a member. These men were followed from their reception into the Army to their separation at the end of their last term of active duty. Completion of the study requires information about subsequent reenlistment.

2. Upon separation, this letter was attached to this man's DA form 1811 and is not to be removed until he makes application for reenlistment. In the event of such application, the Recruiting Officer will detach the letter, complete the form on the reverse side, and forward directly to:

U.S. Army Leadership Human Research Unit
Post Office Box 787
Presidio of Monterey
California

Attention: TRANSITION

FOR THE CHIEF:

/s/ Betty K. Kunert
BETTY K. KUNERT
Maj, WAC
Executive Officer

REPORT OF REENLISTMENT

1. The man named on the reverse side of this form has applied on _____ for reenlistment in the:

insert date

(check one)

_____ Army

_____ Navy

_____ Air Force

_____ Marine Corps

_____ Coast Guard

for period of _____ years.

2. The following action has been taken on his application:

_____ Enlistment accepted.

_____ Enlistment NOT accepted for reasons of

Typed name, grade, and organization
of Recruiting Officer.

Signature of Recruiting
Officer

(Forward to: USA Leadership HRU, P.O. Box 787, Presidio of Monterey,
California, Attention: TRANSITION)

HumRRO TRANS I-2

Appendix C

SUMMARY OF SERVICE DATA

This appendix presents the data for the separate items of Summary of Service from which the composite criterion score (CCS) and eligibility to reenlist were derived. Data are presented separately for volunteers and draftees and are expressed as percentages of the total for each component.

These data are based on the high-quality Army input of 1961. Parameter values have changed substantially since then with the change in Army input standards.

Grade at Separation

| Component | E-1 | E-2 | E-3 | E-4 | E-5 | E-6 |
|-----------|-----|-----|------|------|------|-----|
| Draftee | 2.6 | 4.0 | 46.2 | 41.5 | 5.7 | 0.0 |
| Volunteer | 5.3 | 4.7 | 17.3 | 47.1 | 25.1 | 0.5 |

Last Conduct Rating

| Component | Unsatisfactory | Fair | Good | Excellent |
|-----------|----------------|------|------|-----------|
| Draftee | 1.0 | 0.5 | 3.4 | 95.1 |
| Volunteer | 4.1 | 1.5 | 6.2 | 88.2 |

Last Efficiency Rating

| Component | Unsatisfactory | Poor | Satisfactory | Excellent |
|-----------|----------------|------|--------------|-----------|
| Draftee | 0.7 | 0.6 | 2.5 | 96.2 |
| Volunteer | 3.3 | 1.8 | 5.6 | 89.3 |

Court Martial Convictions

| Component | None | Summary | Other |
|-----------|------|---------|-------|
| Draftee | 97.6 | 1.3 | 1.1 |
| Volunteer | 93.1 | 2.2 | 4.7 |

Length of Active Duty Service

| Component | Months | | | | | |
|-----------|--------|------|-------|-------|-------|------|
| | 0-6 | 7-13 | 14-20 | 21-24 | 25-32 | 33+ |
| Draftee | 9.4 | 1.5 | 1.0 | 87.0 | 1.0 | 0.1 |
| Volunteer | 2.6 | 3.2 | 2.8 | 2.4 | 4.8 | 84.2 |

Reason for Termination^a

| Component | Released from Active Duty to Reserve Status (ETS) | Enlisted or Reenlisted | Board Action | Court Martial Action | Other |
|-----------|---|---------------------------|-----------------|-------------------------|-------|
| Draftee | 85.5 | 0.8 | 2.4 | 0.9 | 10.4 |
| Volunteer | 77.5 | 7.0 | 6.3 | 2.0 | 7.2 |

^aExcluded are 8 draftees and 28 volunteers discharged to accept a commission.

Unclassified

Security Classification

| DOCUMENT CONTROL DATA - R & D | | |
|--|--|---|
| (Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified) | | |
| 1. ORIGINATING ACTIVITY (Corporate author) Human Resources Research Office The George Washington University Alexandria, Virginia 22314 | | 2a. REPORT SECURITY CLASSIFICATION Unclassified 2b. GROUP |
| 3. REPORT TITLE RELATIONSHIP BETWEEN ARMY RECRUIT CHARACTERISTICS AND FIRST TOUR PERFORMANCE | | |
| 4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Technical Report | | |
| 5. AUTHOR(S) (First name, middle initial, last name) John S. Caylor | | |
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| 10. DISTRIBUTION STATEMENT This document has been approved for public release and sale; its distribution is unlimited. | | |
| 11. SUPPLEMENTARY NOTES Work Unit TRANSITION, Research on Factors of Civilian-Military Transition of Army Recruits | 12. SPONSORING MILITARY ACTIVITY Office, Chief of Research and Development Department of the Army Washington, D.C. 20310 | |
| 13. ABSTRACT A follow-up study of recruits, whose adaptation to the Army was initially studied in Basic Combat Training in October-December 1961, was conducted to determine their performance subsequent to BCT and their degree of success in the Army in relationship to recruit characteristics observed during BCT. Administrative data were collected on 1,782 volunteers and 2,620 draftees in 30 BCT companies by means of questionnaires completed at the time of their termination in 1963 and 1964. It was found that the older, better educated, higher aptitude recruit adapted best, performed best, and contributed most to the Army throughout his period of service. There was a positive relationship between judgments of BCT peers and subsequent performance. The more favorable the recruits' early attitude toward the Army, the less contribution they made to the Army throughout their tour of duty. Recruits from the lower ranges of age, education, and GT were more likely to have problems in adjustment, discipline, and training. Early Army performance (BCT proficiency and sociometric peer ratings) was predictive of later Army success. Early attitudes toward the Army and career orientation showed an inverse relationship to success in or contribution to the Army. | | |

DD FORM 1473
1 NOV 65

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Security Classification

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| 14. | KEY WORDS | LINK A | | LINK B | | LINK C | |
|-----|-------------------------------------|--------|----|--------|----|--------|----|
| | | ROLE | WT | ROLE | WT | ROLE | WT |
| | Aptitude | | | | | | |
| | Army Service Criterion | | | | | | |
| | Attitude | | | | | | |
| | Draftee Performance | | | | | | |
| | Individual Behavior | | | | | | |
| | Individual Differences and Training | | | | | | |
| | Motivation | | | | | | |
| | Post-BCT Performance | | | | | | |
| | Recruit Characteristic Variables | | | | | | |
| | Summary-of-Service Form | | | | | | |
| | Volunteer Performance | | | | | | |

Unclassified

Security Classification

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2 NASA SCI & TECH IMPD FACILITY COLLEGE PARK MD
1 CINC US EUROPEAN COMD ATTN SUPPORT PLANS BR J3
1 CINC US ARMY PACIFIC APO 9655B SAN FRAN ATTN G3 CBT DEVEL DIV
2 CG SOUTHERN EUROPEAN TASK FORCE APO 0916B NY
1 CG US ARMY JAPAN APO 96343 SAN FRAN ATTN G3
1 CG US ARMY FORCES SOUTHERN COMD ATTN SCARCO APO 09834 NY
1 CG US ARMY ALASKA ATTN ARACO APO 98749 NY
2 CG US ARMY EUROPE APO 09403 NY ATTN OPNS DIV
1 CG US ARMY AO COMD ENT AFB ATTN AOCGB
2 CG 1ST ARMY FT GEORGE G MEADE
1 CG 3RD US ARMY FT MCMEHSON GA
1 CG FOURTH ARMY FT SAN HOUSTON ATTN G3
1 CG FIFTH ARMY FT SHERIDAN ATTN ALFGC TNG
1 CG EUSA ATTN AG-AC APO 96301 SAN FRAN
2 CG EUSA ATTN G-3 APO 96301 SAN FRAN
1 CLIN PSYCHOL SERV DEPT OF NEUROPSYCHIAT WALTER REED GEN HOSP
1 DIR HML APO MD
1 CG USA CDC EXPERIMENTATION COMD FT ORD
2 ENGRN PSYCHOL LAB PIONEERING RES DIV ARMY MATICK LABS RATICK MASS
1 TECH LIB ARMY NATICK LABS NATICK MASS
1 CG USA CDC INST OF LAND CBT FT BELVOIR
1 REOSTONE SCIENTIFIC IMPD CTR US ARMY MSL COMD ATTN CMF ODC SEC ALA
1 CG USAPA NBLTV DET TOBYHANNA ARMY DEPOT
1 CG ARMY ELEC PG FT HUACHUCA ATTN TECH LIB
1 SIXTH U S ARMY LIB DEPTD BLDG R 13 14 PRES OF SAR
1 PLANS OFFICER PSYCH HODTRES USACOCCEC FORT ORD
1 CG FT ORD ATTN G3 TNG DIV
2 DIR MAIR WALTER REED ARMY MED CTR ATTN NEUROPSYCHIAT DIV
1 CG HQ ARMY ENLISTED EVAL CTR FT BENJ HARRISON
1 DPTY FOR BIOASTRONAUT PG AIR PG CTR EGLIM AFB
1 CG USA MOBILITY EQUIP RED CTR ATTN TECH ODC CTR FT. BELVOIR
1 CG FRANKFORD ARSNL ATTN SMUPA-R6400/2202-4
1 CG 5TH RGN USARADCOM ATTN G3 TNG GUNTER AFB ALA
3 6TH RGN USARADCOM FT BAKER
1 4TH ARMY MSL COMD AIR TRANSPORTABLE SAN FRAN
2 CG PICATINNY ARSNL DODVER M J ATTN SUMPVA VCI
1 DEF SUPPLY AGY CACHERON STATION ATTN LIB
1 CG ARMY CBT DEVEL COMD FT BENJ HARRISON ATTN ADJ GEN AGY
1 REF M HS IS NASA ALA
1 CBT DPMS RES GP CDC FT BELVOIR ATTN SR OPNS ANLS HUMAN FACTORS
1 CG ARMY CDC INF AGY FT BENNING
1 CG ARMY CDC ARMOR AGY FT KNOX
1 EVAL DIV OAD ARMY SIG CTR + SCH FT MONMOUTH
1 CG US ARMY CDC AVN AGCY FT RUCKER
1 CMF CURRICULUM BR RESIDENT INSTR DEPT ARMY LOGISTICS MANGT CTR FT LFE
3 CIVILN PERS OFCR US ARMY SPT CTR ST LOUIS ATTN EMPLOYEE DEVEL OFCR
1 LIB ARMY WAR COLL CARLISLE BNS
1 COMDOT ARMY INTEL SCH ATTN AMHD-AD FT HOLABIRD
1 COMDOT COMD + GEN STAFF CG FT LEAVENWORTH ATTN ARCHIVES
1 DIR OF MILIT PSYCHOL + LDRSHIP US MILIT ACADE WEST POINT
1 US MILIT ACADE WEST POINT ATTN LIB
1 COMDOT ARMY ARMOR SCH FT RUCKER ATTN SCH LIB
1 COMDOT ARMY SECUR AGY TNG CTR + SCH FT DEVENS ATTN LIB
1 COMDOT ARMED FORCES INOSTR COLL FT LESLEY J MCNAIR
2 COMDOT NATL WAR COLL FT LESLEY J MCNAIR ATTN CLASSF RECORDS BR LIB
1 MED FLO SERV SCH BROOKER ARMY MED CTR FT SAN HOUSTON ATTN STINSON LIB
1 DIR OF INSTR ARSNL SCH FT KNOX
1 COMDOT ARMY ARMOR SCH FT KNOX ATTN WEAPONS DEPT
1 COMDOT ARMY CHAPLAIN SCH FT HAMILTON
1 COMDOT ARMY CHEM CORPS SCH FT MCLELLAN ATTN EDUC ADV
1 ARMY FINANCE SCH FT BENJ HARRISON
4 COMDOT ARMY ADJ GEN SCH FT BENJ HARRISON ATTN EDUC ADV
1 EDUC ADV USA ATTN AJIIS-5 FT BENNING
1 DIR OF INSTR USAIS ATTN AJIIS-D-EPRD FT BENNING
1 LIB ARMY DN SCH FT LEE
1 COMDOT ARMY DN SCH FT LEE ATTN EDUC ADV
1 COMDOT ARMY TRANS SCH FT EUSTIS ATTN EDUC ADV
1 COMDOT ARMY MILIT POLICE SCH FT GORDON ATTN DIR OF INSTR
2 COMDOT US ARMY SOUTHEASTERN SIG SCH ATTN EDUC ADVISOR FT GORDON
1 COMDOT USA AO SCH FT BLISS
1 CG ARMY DRD CTR + SCH ABERDEEN PG ATTN AISO-SL
5 ASST COMDOT ARMY AIR DEF SCH FT BLISS ATTN CLASSF TECH LIB
4 CG ARMY ARMY + MSL CTR FT SILL ATTN AVN OFPR
1 COMDOT ARMED FORCES STAFF COLL NORFOLK
1 COMDOT ARMY SIG SCH FT MONMOUTH ATTN EDUC COORD
1 COMDOT JUDGE ADVOCATE GENERALS SCH U OF VA
1 DPTY ASST COMDOT USA AVN SCH ELEMENT GA
1 USA AVN SCH ELEMENT OFC OF DIR OF INSTR ATTN EDUC ADV GA
1 EDUC CONSLT ARMY MILIT POLICE SCH FT GORDON
6 COMDOT ARMY ENGRN SCH FT BELVOIR ATTN AIBBES-SY
1 COMDOT ARMY PRINRY HEL SCH FT NOLTERS
1 DIR US MIL ACADE WEST POINT
1 DIR DP MILIT INSTR US MILIT ACADE WEST POINT
1 SPEC WARFARE SCH LIB FT BRAGG
4 USA SPEC WARFARE SCH ATTN: COUNTERINSURGENCY DEPT FT BRAGG
1 COMDOT US ARMY NGT SCH FT BELVOIR
2 SECY US ARMY NSL & MUNITIONS CTR & SCH REOSTONE ARSNL
2 COMDOT WOMENS ARMY CORPS SCH + CTR FT MCLELLAN
2 HD ABERDEEN PG ATTN TECH LIB
1 COMDOT US ARMY INTEL SCH FT HOLABIRD
1 COMDOT ARMY DN SCH OFC DIR OF MONRESIO ACTVY FT LEE ATTN TNG MEDIA DIV
2 DIR BRGD + RGN OPS DEPT USA FT BENNING
1 LEADERSHIP COMD CDP DEPT US ARMY INF SCH FT BENNING
1 DIR COMN ELEC USAIS FT BENNING
1 DIR ABN-AIR MOBILITY DEPT USAIS FT BENNING
2 DIR COMPANY TACTICS DEPT USAIS FT BENNING
1 CG US ARMY SIGNAL CTR & SCH ATTN SIGOLT-3 (COBET III)
1 SECY OF ARMY, PENTAGON
1 DCS-PERS DA ATTN CMF C+S DIV
1 DIR OF PERS STUDIES + RES DOCSER DA ATTN BG MALLAC L CLEMENT
2 AGS FOR PERS DEVEL AO ATTN CMF TNG DIV

1 CG USA NAT COMD ATTN ANCRD-TE
1 CMF OF ENGRS DA ATTN ENGTG-T
1 HD ARMY NAT COMD R+O ORCTE ATTN ANCRD-RC
1 CLIN PSYCHOL CONSLT OFC OF CMF PSYCHIAT + NEUROL CONSLT OFC OF SURG GEN
2 CG ARMY MED R+O COMD ATTN BEHAV SCI RES BR
1 US ARMY BEHAVIORAL SCI RES LAB WASH, D.C. ATTN: CRD-AR
1 OPD PERS HGT DEV OFC ATTN MOS SEC INEN EDUPLI DPMD
1 ARMY PROVOST MARSHAL GEN
1 OFC RESERVE COMPOD OA
2 CMF ARMY SECUR AGY ARLINGTON HALL STA ATTN AC DP S GL
5D ADMIN DDC ATTN: TCA (HEAVY) CAMERON STA ALEX., VA. 22314
1 CG US ARMY MED RES LAR FT KNOX
1 CMF OF R+O DA ATTN CMF TECH + INOSTR LIAISON OFC
2 CG ARMY MED R+O COMD ATTN MEDHON-SR
1 U S ARMY BEHAVIORAL SCI RES LAB WASH, D.C. ATTN CRD-AIC
2 TNG + DEVEL DIV ODCS-PFAS
1 CG US ARMY NAT COMD WASH D.C. ATTN: AMCPT-CR ROBT DETIENRE
1 PRES ARMY INF 80 FT BENNING ATTN FE+SP DIV
1 PRES ARMY MAINT 80 FT KNOX
2 PRES ARMY ARTY 80 FT SILL
1 DPTY PRES ARMY RAT COMD BO ABERDEEN PG
1 US ARMY ARCTIC TEST CTR R & D OFFICE SEATTLE
3 CG 4TH ARMORED DIV APO 09326 NY
1 CG 3D ARMORED CAV REGT APO 09034 NY
1 CG 14TH ARMORED CAV REGT APO 09026 NY
2 CG ARMY ARMOR & ARTY FT FIRING CTR FT STEWART ATTN AC OF S TNG OFCR
1 1ST ARMORED DIV HD L HD CO FT HODD ATTN AC OF S G2
5 1ST INF DIV 1ST MED TANK BN 630 ARMOR FT RILEY
2 3D INF DIV 1ST BN 64TH ARMOR APO 09036 NY
8 8TH INF DIV 2D BN 68TH ARMOR APO 09036 NY
1 CG COMPANY A 3D BN 320 ARMOR 3D ARMORED DIV (SPEARHEAD) APO 09099 NY
5 5TH BN 320 ARMOR FT KNOX
1 CG 3D MED TANK BN 68TH ARMOR ATTN S3APO 09026 NY
1 CG 3D MED TANK BN 37TH ARMOR APO 09066 NY
6 CG 2D BN 34TH ARMOR APO 96266 SAN FRAN
2 CALIF NG 40TH ARMORED DIV LDS ANGELES ATTN AC OF SG3
1 CG 24TH INF DIV ATTN G3 FT RILEY
1 CG HD 27TH ARMORED DIV NY AIR NG SYRACUSE
1 TEXAS NG 49TH ARMORED DIV DALLAS
1 CG ARMY ARMOR CTR FT KNOX ATTN G3 AIBKGT
2 CG 1ST INF DIV ATTN G3 APO 96345 SAN FRAN
1 CG 3RD INF DIV ATTN G3 NY
3 CG 4TH INF DIV ATTN G3 APO 96262 SAN FRAN
1 CG 7TH INF DIV ATTN G2 APO 96207 SAN FRAN
1 CG 8TH INF DIV ATTN G2 APO 09111 NY
1 CG 5TH INF DIV IMECHI FT CARSON
5 CG 24TH INF DIV ATTN G3 FT RILEY
3 CG 82D ABN INF DIV FT BRAGG ATTN G3
1 CG 197TH INF BRGO FT BENNING ATTN S3
1 CG 1ST BN (IREINF) 3D INF 1TH OLD GUARDI FT MYER
1 CG HD 2D BN 6TH INF REGT APO 09742 NY
7 3D BN 6TH INF REGT APO 09742 NY
1 CG 171ST INF BRGO APO 96731 SEATTLE
3 CG 25TH INF DIV APO 96225 SAN FRAN
1 CG 4TH BG 30TH INF FT SILL
1 CG 3D BN 39TH INF APO 09029 NY
1 CG 1ST BN 39TH INF APO 09034 NY
1 CG 2ND BN 15TH INF NY ATTN S3
5 CG 1ST BN (IRECH) 52D INF 1ST ARMORED DIV IDLO IRONSIDES FT MOND
7 4TH BN (IMECH) 54TH INF FT KNOX
1 CG ARMY PARTIC GP NAV TNG DEVICE CTR FT WASHINGTON ATTN CODE 01A
1 DA OFC OF ASST CMF OF STAFF FOR CONN-ELCT ATTN CETS-8 WASH
1 CMF MED RES PROJ ARMY HOSP US MILIT ACADE WEST POINT
1 CG MILIT DIST OF WASHINGTON
1 DIR ARMY LIB PENTAGON
1 CMF OF MILIT HIST DA ATTN GEN REF BR
1 CG 24TH ARTY GP IADI COVENTRY
1 CG 31ST ARTY BRGO AIR DEF DAKOTA PENNA
1 20TH ARTY GP AIR DEF SELFROCK AFB
1 52D ARTY BRGO AD FT HANCOCK
1 HD NIAGARA-BUFFALO DEF 31ST ARTY BRGO AIR DEF LOCKPORT
1 HD 49TH ARTY BRGO AIR DEF ARLINGTON HTS ILL
1 35TH ARTY BRGO AIR DEF FT GED G MEADE
1 CG 101ST ABN DIV FT CAMPBELL
1 CG 1ST CAV DIV APO 96490 SAN FRAN
1 US ARMY TROPIC TEST CTR PO ORAMER 942 ATTN BEHAV SCIENTIST FT CLAYTON
2 CINC US PACIFIC FLT FPO 96614 SAN FRAN
1 CINC US ATLANTIC FLT CODE 312A NORFOLK ATTN LTC DOTY
1 CINC PACIFIC OPS ANLS SECT FPD 96610 SAN FRAN
1 CDR TNG COMMAND US PACIFIC FLT SAN DIEGO
1 CMF BUR OF MED + SURG ON ATTN CODE 513
1 CMF RES DIV BUR OF MED + SURG OR
1 HEAD CLIN PSYCHOL SECT PROPSNL DIV BUR OF MED + SURG DN
5 TECH LIB PERS IIB BUR OF NAV PERS ARL ANNEK
3 DIR PERS RES DIV BUR OF NAV PERS
1 TECH LIB BUR OF SHIPS CODE 210L NAVY DEPT
1 BUR OF VOS + DKS DN ATTN ASST CMF FOR RES DEVEL TEST + EVAL
1 NAV AIR SYS COMD REP ATLANTIC NAV AIR STA NORFOLK
1 HUMAN FACTORS BR PSYCHOL RES DIV ONR
1 ENGRN PSYCHOL BR DNR CODE 455 ATTN ASST HEAD NASH DC
3 CG + DIR NAV TNG DEVICE CTR ORLANDO ATTN TECH LIB
1 CG FLT ANTI-AIR WARFARE TNG SAN DIEGO
1 CG NUCLEAR WEAPONS TNG CTR PACIFIC U S NAV AIR STA SAN DIEGO
1 CG NAV AIR DEVEL CTR JOHNSVILLE PENNA ATTN NADC LTB
2 CG FLT TNG CTR NAV BASE NEWPORT
1 CDR FLT TNG GP NAV BASE CHARLESTON
2 CG FLT TNG CTR NORFOLK
1 CG FLEET TNG CTR U S NAV STA SAN DIEGO
1 CLIN PSYCHOL MENTAL HYGIENE UNIT US NAV ACAD ANHAPOLIS
1 PRES NAV WAR COLL NEWPORT ATTN MAHAN LIB
3 CG SERV SCH COMD NAV TNG CTR SAN DIEGO
3 CG NAV GUIDED NSL SCH OAR NECK VA BEACH
2 CG + DIR ATLANTIC FLT ANTI-SUB WARFARE TACTICAL SCH NORFOLK
1 CG NUCLEAR WEAPONS TNG CTR ATLANTIC NAV AIR STA NORFOLK
2 CG FLT SONAR SCH KEY WEST
1 CG FLT ANTI-SUB WARFARE SCH SAN DIEGO
1 CMF OF NAV RES ATTN SPEC RSST FOR R & D

1 CME OF NAV RES ATTN HEAD PERS + TNG BR CODE 45B
 1 CME OF NAV RES ATTN DIR PSYCHOL SCI DIV CODE 450
 1 CME OF NAV RES ATTN HEAD GP PSYCHOL BR CODE 452
 1 DIR US NAV RES LAB ATTN CODE 5120
 1 CO OFF OF NAV RES BR OFFICE BOX 39 FPO 09510 NY
 1 CME OF NAV ATR TNG RES DEPT NAV AIR STA PENSACOLA
 1 CO NAV SCN OF AVN NEO NAV AVN MEO CTR PENSACOLA
 1 LTB NAV NEO RES LAB NAV SUB BASE GDOTON
 1 CO MEO FLD RES LAB CAMP LEJEUNE
 1 COR NAV HSL CTR POINT MUGG CALIF ATTN TECH LIB CODE 3022
 1 DIR AEROSPACE CREW EQUIP LAB NAV ATR ENGR CTR PA
 3 OTC NAV PERS RES ACTVY SAN DIEGO
 1 NAV NEUROPSYCHIAT RES UNIT SAN DIEGO
 1 OTR PERS RES LAB NAV PERS PROGRAM SUPPORT ACTIVITY WASH NAV YO
 1 COMDT MARINE CORPS HQ MARINE CORPS ATTN CODE AM-1B
 1 HQ MARINE CORPS ATTN AX
 1 OTR MARINE CORPS EDUC CTR MARINE CORPS SCH QUANTICO
 1 OTR MARINE CORPS INST ATTN EVAL UNIT
 1 CME OF NAV OPNS OP-01P1
 1 CME OF NAV OPNS OP-0772
 2 COMDT HQS 8TH NAV DIST ATTN EDUC ADV NEW ORLEANS
 1 CME OF NAV ATR TECH TNG NAV AIR STA MEMPHIS
 1 OTR OPS EVAL GRP OFF OF CME OF NAV OPS OP03EG
 2 COMDT PTP COAST GUARD HQ
 1 CME OF NAV PERS RES + REVIEW BR COAST GUARD HQ
 1 OPNS ANLS OFC HQ STRATEGIC AIR COMD OFFUTT AFB
 1 ATR TNG COMD RANDOLPH AFB ATTN ATFM
 1 CME SCI DIV DCTE SCI + TECH OCS R+D HQ AIR FORCE AFRTA
 1 CME SPEC WARFARE DIV DCTE OF PLANS + OPNS OCS-PLANS+OPNS HQ AIR FORCE
 1 CME OF PERS RES BR DCTE OF CIVILIAN PERS OCS-PERS HQ AIR FORCE
 1 CME ANAL DIV IAPPOPL TRI DIR OF PERSONNEL PLANNING HQS USAF
 2 OPTY TIG USAF (AFIAS-G1) MORTON AFB
 1 FAA CHM IMFD RETRIEVAL BR WASH D.C.
 1 FED AVN AGY MED LIB HQ-640
 1 HQ AFSC SCBB ANDREWS AFB
 1 ROME AIR DEVEL CTR WASH GRIFFISS AFB
 2 SACRAMENTO AIR MAT AREA SMACU-PERS RES MCCLELLAN AFB
 1 ATC ATXRO RANDOLPH AFB
 1 HQ SANSO (SMSTR) AF UNIT POST OFC LA AFS CALIF
 2 MILIT TNG CTR OPE LACKLAND AFB
 2 6570TH AERO MED RES LAB MRPT WRIGHT-PATTERSON AFB
 1 ATR MOVEMENT DESIGNATOR ARMR BROOKS AFB
 1 HQS ATC DCS/TECH TNG (ATMNS) RANDOLPH AFB
 2 HQ ATR TRANS COMD ATCTD-M RANDOLPH AFB
 1 CDR ELEC SYS DIV LG HANSCOM FLD ATTN ESTI
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 1 DIR OF LIB US AIR FORCE ACAD
 1 COMDT DEF WPNS SYS MGT CTR AF INST OF TECH WRIGHT-PATTERSON AFB
 1 COMDT ATTN LIB DEF WPNS SYS MGT CTR AF INST OF TECH WRIGHT-PATTERSON AFB
 1 DCTE OF AEROSPACE SAFETY AFIAS-L OPTY IG MORTON AFB
 1 6570TH PERS RES LAB PRA-4 AEROSPACE NEO DIV LACKLAND AFB
 2 AF HUMAN RESOURCES LAB MORTON WRIGHT-PATTERSON AFB
 2 CO HUMAN RESOURCES LAB BROOKS AFB
 1 PSYCHOBIOLOGY PROG NATL SCI FOUND
 1 DIR NATL SECUR AGY FT GED G MEADE ATTN YOL
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 5 CIA ATTN OCA/ADD STANDAR DIST
 1 SYS EVAL DIV RES DIRECTORATE DOD-DCO PENTAGON
 1 DEPT OF STATE BUR OF INTEL + RES EXTERNAL RES STAFF
 1 SCI IMFO EXCH WASHINGTON
 2 CME MGT & GEN TNG DIV TR 200 FAA WASH DC
 1 BUR OF RES & ENGR US POST OFC DEPT ATTN CME HUMAN FACTORS BR
 1 EDUC MEDIA BR DEPT OF MEM ATTN T O CLENNIS
 1 OFC OF INTERNATL TNG PLANNING & EVAL BR ATO WASH DC
 2 SYS DEVEL CORP SANTA MONICA ATTN LIB
 1 OUNLAP + ASSOC INC DARTEN ATTN LIB
 2 RESEARCH ANALYSIS CORP MCLEAN VA 22101
 1 DIR RAND CORP SANTA MONICA ATTN LIB
 1 U OF ILL GP EFFECTIVE RES LAB
 1 U OF SO CALIF ELEC PERS RES GP
 1 NITRE CORP BEDFORD MASS ATTN LIB
 2 U OF PENN LEARNING RAO CTR ATTN DIR
 1 HUMAN SCI RES INC NOREDOK
 1 WESTERN ELECTRIC CO INC NY
 1 HUMAN SCI RES INC MCLEAN VA
 2 TECH INFO CTR ENGR DATA SERV N AMER AVN INC COLUMBUS O
 1 CHRYSLER CORP MSL DIV DETROIT ATTN TECH INFO CTR
 1 CTR FOR RES IN SOCIAL SYS AMER U ATTN LIB
 1 RAYTHEON CO ELEC SERV OPNS BURLINGTON MASS
 1 EDUC & TNG CONSULTANTS ATTN L C SILVER LA
 1 GEN DYNAMICS PONDNA DIV ATTN LIB DIV CALIF
 1 AVN SAFETY ENGR & RES DIV OF FLIGHT SAFETY FOUND INC PHOENIX
 2 MARQUARDT CORP PONDNA CALIF ATTN DEPT 980
 1 CME PERS SUBSYS AIRPLANE DIV MS 74-90 RENTON WASH
 1 THIOKOL CHEN CORP HUMETRICS DIV LOS ANGELES ATTN LIB
 2 CTR FOR RES IN SOCIAL SYS FLD OFC FT BRAGG
 1 INST FOR DEF ANLS RES + ENGR SUPPORT DIV WASHINGTON
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 1 CANADIAN ARMY STAFF WASHINGTON ATTN GS02 TNG
 2 CANADIAN LIAISON OFCR ARMY ARMOR 80 FT KNOX
 3 ACS FOR INTEL FOREIGN LIAISON OFCR TO NORWEG MILIT ATTACHE
 1 ARMY ATTACHE ROYAL SWEDISH EMBY WASHINGTON
 1 NATL INST FOR ALCOHOL RES DSLO
 1 DEF RES MED LAB ONTARIO
 1 OFC OF AIR ATTACHE AUSTRALIAN EMBY ATTN: T.A. NAVGN WASH D.C.
 1 YDRK U DEPT OF PSYCHOL
 2 AUSTRALIAN EMBY OFC OF MILIT ATTACHE WASHINGTON
 1 U OF SHEFFIELD DEPT OF PSYCHOL
 2 U OF SHEFFIELD FOUNDATION TOPEKA
 2 AMER INST FOR RES SILVER SPRING
 1 AMER INST FOR RES PGH ATTN LIB
 1 OIR PRIMATE LAB UNIV OF WIS MADISON
 1 COLUMBIA U SCH OF BUS
 3 MATRIK CORP ALEXANDRIA ATTN TECH LIAN
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 1 VITRO LABS SILVER SPRING MD ATTN LIB
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 1 U OF GEORGIA DEPT OF PSYCHOL
 1 U OF UTAH DEPT OF PSYCHOL
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 1 OHIO STATE U SCH OF AVN
 1 AIRCRAFT ARMAMENTS INC COCKEYSVILLE MD
 2 OREGON STATE U DEPT OF MILIT SCI ATTN AOJ
 1 TUFTS U HUMAN ENGR INFO + ANLS PROJ
 1 HUMAN FACTORS RES GP WASH U ST LOUIS
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 2 DIR INSTR RESOURCES STATE COLL ST CLOUD MINN
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 1 A A HEYL ASSOC DIR CAREL WASH DC
 1 CME PROCESSING DIV OUKF U LIB
 1 U OF CALIF GEN LIB DOCU DEPT
 1 FLORIDA STATE U LIB GIFTS + EXCH
 1 HARVARD U PSYCHOL LABS LIB
 1 U OF ILL LIB SER DEPT
 2 U OF KANSAS LIB PERIODICAL DEPT
 1 U OF NEBRASKA LIBS ACQ DEPT
 1 OHIO STATE U LIBS GIFT + EXCH DIV
 1 PENNA STATE U PATTEE LIB DOCU DESK
 1 PURQUE U LIBS PERIODICALS CHECKING FILES
 1 STANFORD U LIBS DOCU LIB
 1 LIBN U OF TEXAS
 1 SYRACUSE U LIB SER DIV
 1 U OF MINNESOTA LIB
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 2 DIR U LIB GED WASHINGTON U
 2 LIB OF CONGRESS CME OF EXCH + GIFT DIV
 1 U OF PGH DOCU LIBN
 1 CATNOLIC U LIB EDUC & PSYCHOL LIB WASH DC
 1 U OF KY MARGARET I KING LIB
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